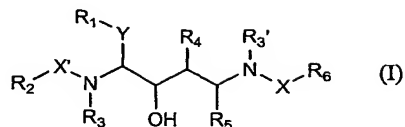


What is claimed is:

1. A compound of formula I:



5

or a pharmaceutically acceptable salt thereof; wherein
R₂ is hydrogen, or

R₂ is (C₃-C₇ cycloalkyl)₀₋₁(C₁-C₆ alkyl)-, (C₃-C₇ cycloalkyl)₀₋₁(C₂-C₆ alkenyl)-, (C₃-C₇ cycloalkyl)₀₋₁(C₂-C₆ alkynyl)- or
10 (C₃-C₇ cycloalkyl)-, wherein each of said groups is optionally substituted with 1, 2, or 3 R₂ groups, wherein 1 or 2 methylene groups within said (C₃-C₇ cycloalkyl)₀₋₁(C₁-C₆ alkyl)-, (C₃-C₇ cycloalkyl)₀₋₁(C₂-C₆ alkenyl)-, (C₃-C₇ cycloalkyl)₀₋₁(C₂-C₆ alkynyl)- or (C₃-C₇ cycloalkyl)-
15 groups are optionally replaced with -(C=O)-;

R₂ at each occurrence is independently halogen (in one aspect, F or Cl), -OH, -SH, -CN, -CF₃, -OCF₃, C₁-C₆ alkoxy, C₃-C₇ cycloalkyl, C₃-C₇ cycloalkoxy or -NR₁₀₀R₁₀₁;

20 R₁₀₀ and R₁₀₁ at each occurrence are independently H, C₁-C₆ alkyl, phenyl, CO(C₁-C₆ alkyl) or SO₂C₁-C₆ alkyl;

X' is -(C=O)- or -(SO₂)-;

Y is absent or is -(CH₂)_n-, where n = 1, 2, or 3 and where up
25 to 3 hydrogens of -(CH₂)_n- are optionally replaced with one, two or three substituents selected from

C₁-C₃ alkyl, -F, -Cl, -Br, -I, -OH, -SH, -C≡N, -CF₃, C₁-C₃ alkoxy, -COOH, -COO(C₁-C₆ alkyl), -N(COR)R', -CONRR' or -NRR' where R and R' independently are -H
30 or C₁-C₁₀ alkyl;

R₁ is H, -(CH₂)₁₋₂-S(O)₀₋₂-(C₁-C₆ alkyl), or

C₁-C₁₀ alkyl optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, =O, -SH, -C≡N, -CF₃, -COOR, C₁-C₃ alkyl, -C₁-C₃ alkoxy, amino, monoalkylamino, dialkylamino, -CONRR', -N(R)C(O)R'-, -OC(=O)-amino, -OC(=O)-monoalkylamino, and -OC(=O)-dialkylamino or

C₂-C₆ alkenyl or C₂-C₆ alkynyl, each of which is optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF₃, C₁-C₃ alkoxy, amino, and mono- or dialkylamino, or

-C₁-C₆ alkyl-(C₃-C₇)cycloalkyl where cycloalkyl can be optionally substituted with C₁-C₃ alkyl, halogen, -OH, -SH, -C≡N, -CF₃, C₁-C₆ alkoxy, -O-phenyl, -CO₂H, -CO₂-(C₁-C₄ alkyl), or -NRR', or

aryl, heteroaryl, heterocyclyl, -C₁-C₆ alkyl-aryl, -C₁-C₆ alkyl-heteroaryl, or -C₁-C₆ alkyl-heterocyclyl, where the ring portions of each are optionally substituted with 1, 2, 3, or 4 of

halogen, -OH, -SH, -C≡N, -NRR', -CO₂R, -N(R)COR', or -N(R)SO₂R', -C(=O)-(C₁-C₄) alkyl, -SO₂-amino, -SO₂-mono or dialkylamino, -C(=O)-amino, -C(=O)-mono or dialkylamino, -SO₂-(C₁-C₄) alkyl, or -C₁-C₆ alkoxy optionally substituted with 1, 2, or 3 independently selected halogens, or

C₃-C₇ cycloalkyl optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF₃, C₁-C₃ alkoxy, amino, -C₁-C₆ alkyl and mono- or dialkylamino, or

C₁-C₁₀ alkyl optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF₃, -C₁-C₃ alkoxy, amino, mono- or dialkylamino and -C₁-C₃ alkyl, or

C₂-C₁₀ alkenyl or C₂-C₁₀ alkynyl each of which is optionally substituted with 1, 2, or 3 groups

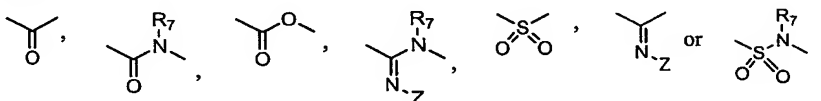
independently selected from halogen, -OH, -SH, -C≡N, -CF₃, C₁-C₃ alkoxy, amino, C₁-C₆ alkyl and mono- or dialkylamino;

R and R' are independently -H or C₁-C₁₀ alkyl;

5 R₃ and R₃' at each occurrence are independently H, C₁-C₆ alkyl, -CO₂-C₁-C₆ alkyl, or -CO-O-(CH₂)_n-phenyl where n is 0, 1 or 2 and phenyl is optionally substituted with C₁-C₆ alkyl;

10 R₄ and R₅ are independently H or C₁-C₆ alkyl optionally substituted with one, two or three substituents independently selected from C₁-C₃ alkyl, halogen, -OH, -SH, -C≡N, -CF₃, C₁-C₃ alkoxy, and -NRR';

X is absent or is:



15 R₇ is H, C₁-C₆ alkyl, -CO-O-C₁-C₆ alkyl, or -CO-O-(CH₂)_n-phenyl where n is 0, 1 or 2 and phenyl is optionally substituted with C₁-C₆ alkyl, and wherein each C₁-C₆ alkyl is optionally independently substituted with one, two or three substituents independently
20 selected from C₁-C₃ alkyl, halogen, -OH, -SH, -C≡N, -CF₃, C₁-C₆ alkoxy, -NR₁₀₂R'₁₀₂,

Z is H, C₁-C₆ alkyl, CN, -O-C₁-C₆ alkyl, or NO₂;

R₁₀₂ and R'₁₀₂ independently are hydrogen, or

25 C₁-C₁₀ alkyl optionally substituted with 1, 2, or 3 groups that are independently halogen, or aryl, wherein aryl is optionally with 1 or 2 R₁₂₅ groups;

30 R₁₂₅ at each occurrence is independently halogen, amino, mono- or dialkylamino, -OH, -C≡N, -SO₂-NH₂, -SO₂-NH-C₁-C₆ alkyl, -SO₂-N(C₁-C₆ alkyl)₂, -SO₂-(C₁-C₄ alkyl), -CO-NH₂, -CO-NH-C₁-C₆ alkyl, or -CO-N(C₁-C₆ alkyl)₂, or

C₁-C₆ alkyl, C₂-C₆ alkenyl or C₂-C₆ alkynyl, each of which is optionally substituted with 1, 2, or 3 groups that are independently selected from C₁-C₃ alkyl, halogen, -OH, -SH, -C≡N, -CF₃, C₁-C₃ alkoxy, amino, and mono- and dialkylamino, or

C₁-C₆ alkoxy optionally substituted with one, two or three of halogen;

R₆ is - (CR₂₄₅R₂₅₀)₀₋₄-aryl, - (CR₂₄₅R₂₅₀)₀₋₄-heteroaryl, - (CR₂₄₅R₂₅₀)₀₋₄-heterocyclyl, - (CR₂₄₅R₂₅₀)₀₋₄-aryl-heteroaryl, - (CR₂₄₅R₂₅₀)₀₋₄-aryl-heterocyclyl, - (CR₂₄₅R₂₅₀)₀₋₄-aryl-aryl, - (CR₂₄₅R₂₅₀)₀₋₄-heteroaryl-aryl, - (CR₂₄₅R₂₅₀)₀₋₄-heteroaryl-heterocyclyl, - (CR₂₄₅R₂₅₀)₀₋₄-heteroaryl-heteroaryl, - (CR₂₄₅R₂₅₀)₀₋₄-heterocyclyl-heteroaryl, - (CR₂₄₅R₂₅₀)₀₋₄-heterocyclyl-heterocyclyl, - (CR₂₄₅R₂₅₀)₀₋₄-heterocyclyl-aryl, - [C(R₂₅₅)(R₂₆₀)]₁₋₃-CO-N-(R₂₅₅)₂, - CH(aryl)₂, - CH(heteroaryl)₂, - CH(heterocyclyl)₂, - CH(aryl)(heteroaryl), - (CH₂)₀₋₁-CH((CH₂)₀₋₆-OH) - (CH₂)₀₋₁-aryl, - (CH₂)₀₋₁-CH((CH₂)₀₋₆-OH) - (CH₂)₀₋₁-heteroaryl, - CH(-aryl or -heteroaryl)-CO-O(C₁-C₄ alkyl), - CH(-CH₂-OH)-CH(OH)-phenyl-NO₂, - (C₁-C₆ alkyl)-O-(C₁-C₆ alkyl)-OH; - (C₁-C₆ alkyl)-O-(C₁-C₆ alkenyl); - (C₁-C₆ alkyl)-O-(C₁-C₆ alkyl)-O-(C₁-C₆ alkyl); - (C₁-C₆ alkyl)-O-(C₀-C₆ alkyl)-aryl; - (C₁-C₆ alkyl)-O-(C₀-C₆ alkyl)-cycloalkyl; -CH₂-NH-CH₂-CH(-O-CH₂-CH₃)₂, - (CH₂)₀₋₆-C(=NR₂₃₅)(NR₂₃₅R₂₄₀), - (C₂-C₆ alkenyl)-heteroaryl, - (CR₂₄₅R₂₅₀)₁₋₄-N(R₂₃₅)-C(=O)-O-(C₁-C₃ alkyl)-aryl, - (CR₂₄₅R₂₅₀)₁₋₄-N(R₂₃₅)-C(=O)-(C₀-C₃ alkyl)-aryl, - (CR₂₄₅R₂₅₀)₁₋₄-N(R₂₃₅)-C(=O)-(C₀-C₃ alkyl)-heteroaryl, - (CR₂₄₅R₂₅₀)₁₋₄-C(=O)-aryl, - (CR₂₄₅R₂₅₀)₁₋₄-C(=O)-heteroaryl, or

C₁-C₁₀ alkyl optionally substituted with 1, 2, or 3 groups independently selected from the group consisting of R₂₀₅, cyclopentenyl, -OC=ONR₂₃₅R₂₄₀, -S(=O)₀₋₂(C₁-C₆ alkyl), -SH, -NR₂₃₅C=ONR₂₃₅R₂₄₀, -C=ONR₂₃₅R₂₄₀, -NR₂₃₅-

$C(=O)-O-R_{205}$, and $-S(=O)_2NR_{235}R_{240}$, $-NR_{235}C(=O)-(C_1-C_6$
 alkyl), $=O$, or
 5 $-(CH_2)_{0-3}-(C_3-C_8)$ cycloalkyl wherein the cycloalkyl is
 optionally substituted with 1, 2, or 3 groups
 independently selected from the group consisting of
 R_{205} , $-CO_2H$, $-CO_2-(C_1-C_4)$ alkyl, $-CO-NH_2$, $-CO-NH(C_1-$
 C_6 alkyl) and $-CO-N-(C_1-C_6)$ alkyl (C_1-C_6) alkyl, or
 cyclopentyl, cyclohexyl, or cycloheptyl ring fused to
 10 aryl, heteroaryl, or heterocyclyl wherein one, two
 or three carbons of the cyclopentyl, cyclohexyl, or
 cycloheptyl is optionally replaced with a heteroatom
 independently selected from NH , NR_{215} , O , and $S(=O)_{0-2}$,
 and wherein the cyclopentyl, cyclohexyl, or
 15 cycloheptyl group is optionally substituted with one
 or two groups that are independently R_{205} , $=O$, $-CO-$
 $NR_{235}R_{240}$, or $-SO_2-(C_1-C_4)$ alkyl, or
 C_2-C_{10} alkenyl or C_2-C_{10} alkynyl, each of which is
 optionally substituted with 1, 2, or 3 independently
 selected R_{205} groups, wherein
 20 each aryl and heteroaryl is optionally substituted with
 1, 2, or 3 R_{200} , and wherein each heterocyclyl is
 optionally substituted with 1, 2, 3, or 4
 independently selected R_{210} , and each cycloalkyl is
 optionally substituted with 1 or 2 R_{205} groups;
 25 R_{200} at each occurrence is independently selected from $-OH$,
 $-NO_2$, halogen, $-CF_3$, $-CO_2H$, $C\equiv N$, $-(CH_2)_{0-4}-CO-NR_{220}R_{225}$,
 $-(CH_2)_{0-4}-CO-(C_1-C_{12})$ alkyl, $-(CH_2)_{0-4}-CO-(C_2-C_{12})$ alkenyl,
 $-(CH_2)_{0-4}-CO-(C_2-C_{12})$ alkynyl, $-(CH_2)_{0-4}-CO-(C_3-C_7$
 cycloalkyl), $-(CH_2)_{0-4}-CO-aryl$, $-(CH_2)_{0-4}-CO-heteroaryl$,
 30 $-(CH_2)_{0-4}-CO-heterocyclyl$, $-(CH_2)_{0-4}-CO-O-R_{215}$, $-(CH_2)_{0-4}-SO_2-$
 $NR_{220}R_{225}$, $-(CH_2)_{0-4}-SO-(C_1-C_8)$ alkyl, $-(CH_2)_{0-4}-SO_2-(C_1-C_{12})$
 alkyl, $-(CH_2)_{0-4}-SO_2-(C_3-C_7)$ cycloalkyl, $-(CH_2)_{0-4}-N(H$ or
 $R_{215})-CO-O-R_{215}$, $-(CH_2)_{0-4}-N(H$ or $R_{215})-CO-N(R_{215})_2$, $-(CH_2)_{0-4}-$
 $N-CS-N(R_{215})_2$, $-(CH_2)_{0-4}-N(-H$ or $R_{215})-CO-R_{220}$, $-(CH_2)_{0-4}-$
 35 $NR_{220}R_{225}$, $-(CH_2)_{0-4}-O-CO-(C_1-C_6)$ alkyl, $-(CH_2)_{0-4}-O-P(O)-$

$(OR_{240})_2$, $-(CH_2)_{0-4}-O-CO-N(R_{215})_2$, $-(CH_2)_{0-4}-O-CS-N(R_{215})_2$, $-(CH_2)_{0-4}-O-(R_{215})$, $-(CH_2)_{0-4}-O-(R_{215})-COOH$, $-(CH_2)_{0-4}-S-(R_{215})$, $-(CH_2)_{0-4}-O-(C_1-C_6)$ alkyl optionally substituted with 1, 2, 3, or 5 -F, C_3-C_7 cycloalkyl, $-(CH_2)_{0-4}-N(H \text{ or } R_{215})-SO_2-R_{220}$,
 5 $-(CH_2)_{0-4}-C_3-C_7$ cycloalkyl,
 C_1-C_{10} alkyl optionally substituted with 1, 2, or 3 independently selected R_{205} groups,
 C_2-C_{10} alkenyl and C_2-C_{10} alkynyl, each of which is optionally substituted with 1 or 2 independently
 10 selected R_{205} groups, wherein
 the aryl and heteroaryl groups at each occurrence are optionally substituted with 1, 2, or 3 groups that are independently R_{205} , R_{210} , or C_1-C_6 alkyl substituted with 1, 2, or 3 groups that
 15 are independently R_{205} or R_{210} , and wherein
 the heterocyclyl group at each occurrence is optionally substituted with 1, 2, or 3 groups that are independently R_{210} ;
 R_{205} at each occurrence is independently selected from C_1-C_6
 20 alkyl, halogen, -OH, -COOH, -O-phenyl, -SH, -S- C_1-C_6 alkyl, -C \equiv N, -CF $_3$, C_1-C_6 alkoxy, NH $_2$, NH(C_1-C_6 alkyl) or N-(C_1-C_6 alkyl)(C_1-C_6 alkyl);
 R_{210} at each occurrence is independently selected from halogen, C_1-C_6 alkoxy, C_1-C_6 haloalkoxy, -NR $_{220}R_{225}$, OH, C \equiv N, -CO-(C_1-C_4 alkyl), -SO $_2$ -NR $_{235}R_{240}$, -CO-NR $_{235}R_{240}$, -C(=O)-(C $_1-C_6$ alkyl)-NR $_{235}-C(=O)-O-R_{205}$, -C(=O)-(C $_1-C_4$ alkyl)-OH, -C(=O)-(C $_1-C_6$ alkyl)-NR $_{235}R_{240}$, -C(=O)-(C $_1-C_6$ alkyl)-imidazolyl, -SO $_2$ -(C $_1-C_4$ alkyl), -CO $_2$ -(C $_1-C_4$ alkyl), =O, or
 25 C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl or C_3-C_7 cycloalkyl, each of which is optionally substituted with 1, 2, or 3 R_{205} groups;
 R_{215} at each occurrence is independently selected from C_1-C_6
 30 alkyl, $-(CH_2)_{0-2}-(\text{aryl})$, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_7 cycloalkyl, and $-(CH_2)_{0-2}-(\text{heteroaryl})$, $-(CH_2)_{0-2}-(\text{heterocyclyl})$, wherein
 35

the aryl group at each occurrence is optionally substituted with 1, 2, or 3 groups that are independently R_{205} or R_{210} , and wherein the heterocyclyl and heteroaryl groups at each occurrence are optionally substituted with 1, 2, or 3 independently selected R_{210} ;

R_{220} and R_{225} at each occurrence are independently selected from -H, - C_3 - C_7 cycloalkyl, -(C_1 - C_2 alkyl)-(C_3 - C_7 cycloalkyl), -(C_1 - C_6 alkyl)-O-(C_1 - C_3 alkyl), - C_2 - C_6 alkenyl, - C_2 - C_6 alkynyl, - C_1 - C_6 alkyl chain with one double bond and one triple bond, -aryl, -heteroaryl, and -heterocyclyl, and - C_1 - C_{10} alkyl optionally substituted with -OH, - NH_2 or halogen, wherein

the aryl, heterocyclyl and heteroaryl groups at each occurrence are optionally substituted with 1, 2, or 3 independently selected R_{270} groups

R_{235} and R_{240} at each occurrence are independently H, or C_1 - C_6 alkyl;

R_{245} and R_{250} at each occurrence are independently selected from -H, halogen, - CF_3 , -OH, - NH_2 , - NR_{235} -C(=O)-O- R_{205} , C_1 - C_4 alkyl, C_1 - C_4 alkylaryl, C_1 - C_4 alkylheteroaryl, C_1 - C_4 hydroxyalkyl, C_1 - C_4 alkoxy, C_1 - C_4 haloalkoxy, -(CH_2) $_{0-4}$ - C_3 - C_7 cycloalkyl, C_2 - C_6 alkenyl, C_2 - C_6 alkynyl, and phenyl; or

R_{245} and R_{250} are taken together with the carbon to which they are attached to form a carbocycle of 3, 4, 5, 6, or 7 carbon atoms, where one carbon atom is optionally replaced by a heteroatom selected from -O-, -S-, - SO_2 -, and - NR_{220} -;

R_{255} and R_{260} at each occurrence are independently selected from -H, -(CH_2) $_{1-2}$ -S(O) $_{0-2}$ -(C_1 - C_6 alkyl), -(C_1 - C_4 alkyl)-aryl, -(C_1 - C_4 alkyl)-heteroaryl, -(C_1 - C_4 alkyl)-heterocyclyl, -aryl, -heteroaryl, -heterocyclyl, -(CH_2) $_{1-4}$ - R_{265} -(CH_2) $_{0-4}$ -aryl, -(CH_2) $_{1-4}$ - R_{265} -(CH_2) $_{0-4}$ -heteroaryl, -(CH_2) $_{1-4}$ - R_{265} -(CH_2) $_{0-4}$ -heterocyclyl, and

C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl and -(CH₂)₀₋₄-C₃-C₇ cycloalkyl, each of which is optionally substituted with 1, 2, or 3 groups independently selected from R₂₀₅, -COOH, -COO(C₁-C₄ alkyl), -CO-NH₂, -CO-NH(C₁-C₆ alkyl), -CO-N-(C₁-C₆ alkyl)(C₁-C₆ alkyl), wherein each aryl or phenyl is optionally substituted with 1, 2, or 3 groups that are independently R₂₀₅, R₂₁₀, or C₁-C₆ alkyl substituted with 1, 2, or 3 groups that are independently R₂₀₅ or R₂₁₀, and wherein each heterocyclyl is optionally substituted with 1, 2, 3, or 4 R₂₁₀;

R₂₆₅ at each occurrence is independently -O-, -S- or -N(C₁-C₆ alkyl)-; and

R₂₇₀ at each occurrence is independently R₂₀₅, halogen C₁-C₆ alkoxy, C₁-C₆ haloalkoxy, NR₂₃₅R₂₄₀, -OH, -C≡N, -CO-(C₁-C₄ alkyl), -SO₂-NR₂₃₅R₂₄₀, -CO-NR₂₃₅R₂₄₀, -SO₂-(C₁-C₄ alkyl), =O, or

C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl or -(CH₂)₀₋₄-C₃-C₇ cycloalkyl, each of which is optionally substituted with 1, 2, or 3 R₂₀₅ groups.

2. A compound according to claim 1 wherein wherein X is



3. A compound according to claim 1 wherein

R₁ and Y together form aryl, heteroaryl, heterocyclyl, -C₁-C₆ alkyl-aryl, -C₁-C₆ alkyl-heteroaryl, or -C₁-C₆ alkyl-heterocyclyl, where the ring portions of each are optionally substituted with 1, 2, 3, or 4 groups independently selected from halogen, -OH, -SH, -C≡N, -NO₂, -NRR', -CO₂R, -N(R)COR', or -N(R)SO₂R', -C(=O)-(C₁-C₄) alkyl, -SO₂-amino, -SO₂-mono or dialkylamino, -C(=O)-amino, -C(=O)-mono or dialkylamino, -SO₂-(C₁-C₄) alkyl, or

C₁-C₆ alkoxy optionally substituted with 1, 2, or 3 groups which are independently selected from halogen, or

C₃-C₇ cycloalkyl optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF₃, C₁-C₃ alkoxy, amino, -C₁-C₆ alkyl and mono- or dialkylamino, or

C₁-C₁₀ alkyl optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF₃, -C₁-C₃ alkoxy, amino, mono- or dialkylamino and -C₁-C₃ alkyl, or

C₂-C₁₀ alkenyl or C₂-C₁₀ alkynyl each of which is optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF₃, C₁-C₃ alkoxy, amino, C₁-C₆ alkyl and mono- or dialkylamino; and the heterocyclyl group is optionally further substituted with oxo.

4. A compound according to claim 1 wherein R₁ and Y together form -(CH₂)_n-aryl, wherein n is 1, 2 or 3 and wherein 1, 2, or 3 hydrogens of -(CH₂)_n- are replaced with one, two or three groups independently selected from F, Cl, Br, I, OH, C₁-C₃ alkoxy, -N(COR)R', and -NRR'. More preferably, n is 1.

5. A compound according to claim 1 wherein X' is -(C=O)-, and R₂ is C₁-C₆ alkyl optionally substituted with 1 or 2 groups independently selected from halogen (in one aspect, F or Cl), -OH, -SH, -CN, -CF₃, -OCF₃, C₁-C₆ alkoxy, C₃-C₇ cycloalkyl, C₃-C₇ cycloalkoxy or -NR₁₀₀R₁₀₁.

6. A compound according to claim 1 wherein

R_6 is $-(CR_{245}R_{250})_{1-4}$ -aryl, $-(CR_{245}R_{250})_{1-4}$ -heteroaryl, $-(CR_{245}R_{250})_{1-4}$ -heterocyclyl, $-(C_1-C_6 \text{ alkyl})-O-(C_1-C_3 \text{ alkyl})$ -aryl; $-(C_2-C_6 \text{ alkenyl})$ -heteroaryl; or

C_1-C_{10} alkyl optionally substituted with 1, 2, or 3 groups independently selected from the group consisting of halogen, $-OH$, $-O$ -phenyl, $-C_1-C_6$ alkoxy, and $-NR_{235}-C(=O)-O-R_{205}$, or

$-(CH_2)_{1-3}-(C_3-C_7)$ cycloalkyl wherein the cycloalkyl is optionally substituted with 1, 2, or 3 groups independently selected from the group consisting of C_1-C_6 alkyl, halogen, $-OH$, $-C\equiv N$, $-CF_3$, C_1-C_6 alkoxy, NH_2 , or

C_2-C_{10} alkenyl or C_2-C_{10} alkynyl, each of which is optionally substituted with 1, 2, or 3 independently selected R_{205} groups, wherein

each aryl and heteroaryl is optionally substituted with 1, 2, or 3 of OH , $-NO_2$, halogen, $-CF_3$, $-CO_2H$, $C\equiv N$, or C_1-C_6 alkoxy, and wherein each heterocyclyl is optionally substituted with 1, 2, or 3 groups independently selected from $-C(=O)-(C_1-C_6 \text{ alkyl})$, $-NR_{235}-C(=O)-O-R_{205}$, $-C(=O)-(C_1-C_4 \text{ alkyl})-OH$, and $-CO_2-(C_1-C_4 \text{ alkyl})$; and

R_{245} and R_{250} at each occurrence are independently selected from $-H$, halogen, $-CF_3$, $-OH$, $-NH_2$, $-C_1-C_4$ alkyl, C_1-C_4 alkoxy, and C_1-C_4 haloalkoxy.

7. A compound according to claim 1 selected from the group consisting of:

$N-[(3S,4S)-4-(\text{acetyl amino})-5-(3,5\text{-difluorophenyl})-3\text{-hydroxy-1-methylpentyl}]-4\text{-methylpentanamide}$;

$N-[(3S,4S)-4-(\text{acetyl amino})-5-(3,5\text{-difluorophenyl})-1\text{-ethyl-3-hydroxypentyl}]-4\text{-methylpentanamide}$;

$N-[(3S,4S)-4-(\text{acetyl amino})-5-(3,5\text{-difluorophenyl})-3\text{-hydroxy-1-propylpentyl}]-4\text{-methylpentanamide}$;

2-(acetylamino)-1,2,4,5-tetradecoxy-1-(3,5-difluorophenyl)-5-[(4-methylpentanoyl)amino]-L-threo-hexitol;

2-(acetylamino)-1,2,4,5,6-pentadeoxy-1-(3,5-difluorophenyl)-5-[(4-methylpentanoyl)amino]-L-threo-heptitol;

N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-methylpentyl]-4-phenylbutanamide;

N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-1-ethyl-3-hydroxypentyl]-4-phenylbutanamide;

N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-propylpentyl]-4-phenylbutanamide;

2-(acetylamino)-1,2,4,5-tetradecoxy-1-(3,5-difluorophenyl)-5-[(4-phenylbutanoyl)amino]-L-threo-hexitol;

2-(acetylamino)-1,2,4,5,6-pentadeoxy-1-(3,5-difluorophenyl)-5-[(4-phenylbutanoyl)amino]-L-threo-heptitol;

N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-methylpentyl]-2-(benzyloxy)acetamide;

N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-1-ethyl-3-hydroxypentyl]-2-(benzyloxy)acetamide;

N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-propylpentyl]-2-(benzyloxy)acetamide;

2-(acetylamino)-5-{[(benzyloxy)acetyl]amino}-1,2,4,5-tetradecoxy-1-(3,5-difluorophenyl)-L-threo-hexitol;

2-(acetylamino)-5-{[(benzyloxy)acetyl]amino}-1,2,4,5,6-pentadeoxy-1-(3,5-difluorophenyl)-L-threo-heptitol;

N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-methylpentyl]-3-cyclopentylpropanamide;

N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-1-ethyl-3-hydroxypentyl]-3-cyclopentylpropanamide;

N-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-propylpentyl]-3-cyclopentylpropanamide;

2-(acetylamino)-5-[(3-cyclopentylpropanoyl)amino]-1,2,4,5-tetradecoxy-1-(3,5-difluorophenyl)-*L*-threo-hexitol;

2-(acetylamino)-5-[(3-cyclopentylpropanoyl)amino]-1,2,4,5,6-pentadeoxy-1-(3,5-difluorophenyl)-*L*-threo-heptitol;

N-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-methylpentyl]-2-ethoxyacetamide;

N-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-1-ethyl-3-hydroxypentyl]-2-ethoxyacetamide;

N-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-propylpentyl]-2-ethoxyacetamide;

2-(acetylamino)-1,2,4,5-tetradecoxy-1-(3,5-difluorophenyl)-5-[(ethoxyacetyl)amino]-*L*-threo-hexitol;

2-(acetylamino)-1,2,4,5,6-pentadeoxy-1-(3,5-difluorophenyl)-5-[(ethoxyacetyl)amino]-*L*-threo-heptitol;

N-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-methylpentyl]-2-propoxyacetamide;

N-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-1-ethyl-3-hydroxypentyl]-2-propoxyacetamide;

N-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-propylpentyl]-2-propoxyacetamide;

2-(acetylamino)-1,2,4,5-tetradecoxy-1-(3,5-difluorophenyl)-5-[(propoxyacetyl)amino]-*L*-threo-hexitol;

2-(acetylamino)-1,2,4,5,6-pentadeoxy-1-(3,5-difluorophenyl)-5-[(propoxyacetyl)amino]-*L*-threo-heptitol;

(3*E*)-*N*-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-methylpentyl]hex-3-enamide;

(3E)-N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-1-ethyl-3-hydroxypentyl]hex-3-enamide

(3E)-N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-propylpentyl]hex-3-enamide;

2-(acetylamino)-1,2,4,5-tetradecoxy-1-(3,5-difluorophenyl)-5-[(3E)-hex-3-enoylamino]-L-threo-hexitol;

2-(acetylamino)-1,2,4,5,6-pentadeoxy-1-(3,5-difluorophenyl)-5-[(3E)-hex-3-enoylamino]-L-threo-heptitol;

(3E)-N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-methylpentyl]pent-3-enamide;

(3E)-N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-1-ethyl-3-hydroxypentyl]pent-3-enamide;

(3E)-N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-propylpentyl]pent-3-enamide;

2-(acetylamino)-1,2,4,5-tetradecoxy-1-(3,5-difluorophenyl)-5-[(3E)-pent-3-enoylamino]-L-threo-hexitol;

2-(acetylamino)-1,2,4,5,6-pentadeoxy-1-(3,5-difluorophenyl)-5-[(3E)-pent-3-enoylamino]-L-threo-heptitol;

(2E)-N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-methylpentyl]hex-2-enamide;

(2E)-N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-1-ethyl-3-hydroxypentyl]hex-2-enamide;

(2E)-N-[(3S,4S)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-propylpentyl]hex-2-enamide;

2-(acetylamino)-1,2,4,5-tetradecoxy-1-(3,5-difluorophenyl)-5-[(2E)-hex-2-enoylamino]-L-threo-hexitol;

2-(acetylamino)-1,2,4,5,6-pentadeoxy-1-(3,5-difluorophenyl)-5-[(2*E*)-hex-2-enoylamino]-L-*threo*-heptitol;

(2*E*)-*N*-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-methylpentyl]pent-2-enamide;

(2*E*)-*N*-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-1-ethyl-3-hydroxypentyl]pent-2-enamide;

(2*E*)-*N*-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-propylpentyl]pent-2-enamide;

2-(acetylamino)-1,2,4,5-tetradecoxy-1-(3,5-difluorophenyl)-5-[(2*E*)-pent-2-enoylamino]-L-*threo*-hexitol;

2-(acetylamino)-1,2,4,5,6-pentadeoxy-1-(3,5-difluorophenyl)-5-[(2*E*)-pent-2-enoylamino]-L-*threo*-heptitol;

N-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-methylpentyl]pentanamide;

N-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-1-ethyl-3-hydroxypentyl]pentanamide;

N-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-propylpentyl]pentanamide;

2-(acetylamino)-1,2,4,5-tetradecoxy-1-(3,5-difluorophenyl)-5-(pentanoylamino)-L-*threo*-hexitol;

2-(acetylamino)-1,2,4,5,6-pentadeoxy-1-(3,5-difluorophenyl)-5-(pentanoylamino)-L-*threo*-heptitol;

N-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-methylpentyl]hexanamide;

N-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-1-ethyl-3-hydroxypentyl]hexanamide;

N-[(3*S*,4*S*)-4-(acetylamino)-5-(3,5-difluorophenyl)-3-hydroxy-1-propylpentyl]hexanamide;

2-(acetylamino)-1,2,4,5-tetradecoxy-1-(3,5-difluorophenyl)-5-(hexanoylamino)-L-threo-hexitol; and
2-(acetylamino)-1,2,4,5,6-pentadeoxy-1-(3,5-difluorophenyl)-5-(hexanoylamino)-L-threo-heptitol.

8. A pharmaceutical composition comprising a compound according to claim 1 and a pharmaceutically acceptable
5 carrier.

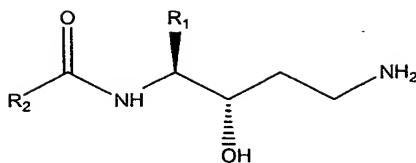
9. A method for the treatment or prevention of Alzheimer's disease, mild cognitive impairment Down's syndrome, Hereditary Cerebral Hemorrhage with Amyloidosis of the Dutch-Type, cerebral amyloid angiopathy, other degenerative dementias, dementias of mixed vascular and degenerative origin, dementia associated with Parkinson's disease, dementia associated with progressive supranuclear palsy, dementia associated with cortical basal degeneration, diffuse Lewy body type of
10 Alzheimer's disease comprising administration of a therapeutically effective amount of a compound or salt according to Claim 1, to a patient in need thereof.
15

10. A method of treatment as in claim 9, wherein the patient
20 is a human.

11. A method of treatment according to claim 9, wherein the disease is dementia.

25 12. A method for making a compound of claim 1.

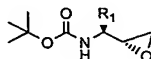
13. An intermediate of the formula 23:



23

wherein R_1 and R_2 are as defined in claim 1.

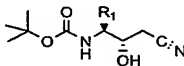
14. An intermediate of formula 19:



19

wherein R_1 is as defined in claim 1.

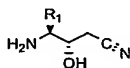
15. An intermediate of formula 20:



20

wherein R_1 is as defined in claim 1.

16. An intermediate of formula 21:



21

wherein R_1 is as defined in claim 1.

17. The use of a compound or salt according to claim 1 for the manufacture of a medicament.

18. The use of a compound or salt according to claim 1 for the manufacture of a medicament for use in the treatment or prevention of Alzheimer's disease, mild cognitive impairment, Down's syndrome, Hereditary Cerebral Hemorrhage with Amyloidosis of the Dutch-Type, cerebral amyloid angiopathy, other degenerative dementias, dementias of mixed vascular and

degenerative origin, dementia associated with Parkinson's disease, dementia associated with progressive supranuclear palsy, dementia associated with cortical basal degeneration, or diffuse Lewy body type of Alzheimer's disease.

5